EAST SEARCH / INTERFERENCE SEARCH

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	31	levosalbutamol	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:16
L2	75321	hydrogenation	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:16
L3	75321	l2 and l2	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:16
L4	3	l2 and l1	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:17
L5	45877	rhodium	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:17
L6	5216	l5 and phosphine	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:17
L7	3	l6 and l1	US-PGPUB; USPAT	OR	OFF	2005/12/07 12:17

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=> d his

     (FILE 'HOME' ENTERED AT 12:03:11 ON 07 DEC 2005)

     FILE 'CAPLUS' ENTERED AT 12:03:17 ON 07 DEC 2005
L1            0 S SALBUTAMONE

     FILE 'REGISTRY' ENTERED AT 12:03:48 ON 07 DEC 2005
               E SALBUTAMONE/CN
L2            1 S E2
               E SALBUTAMOL/CN
L3            1 S E3

     FILE 'CAPLUS' ENTERED AT 12:05:03 ON 07 DEC 2005
L4            5 S L2 AND L3

     FILE 'REGISTRY' ENTERED AT 12:06:44 ON 07 DEC 2005
               E LEVOSABUTAMOL/CN
L5            1 S E4

     FILE 'CAPLUS' ENTERED AT 12:07:18 ON 07 DEC 2005

     FILE 'REGISTRY' ENTERED AT 12:07:20 ON 07 DEC 2005

     FILE 'CAPLUS' ENTERED AT 12:07:33 ON 07 DEC 2005
L6           19 S L5/P
L7           37 S HYROGENATION
L8       169937 S HYDROGENATION
L9            2 S L8 AND L6
L10       66908 S RHODIUM
L11       66644 S PHOSPHINE
L12          20 S LL1 AND L10
L13           0 S L12 AND L6

=> d bib abs 16

L6   ANSWER 1 OF 19  CAPLUS  COPYRIGHT 2005 ACS on STN
AN   2005:558824  CAPLUS
DN   143:153146
TI   New process for preparing L-salbutamol
IN   Chen, Jianlong
PA   Suzhou Junning New Medicine Developing Center Co., Ltd., Peop. Rep. China;
     Shanghai GLSynthesis Co. Ltd.
SO   Faming Zhuanli Shenqing Gongkai Shuomingshu, 10 pp.
     CODEN: CNXXEV
DT   Patent
LA   Chinese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.          DATE
     ---------------     ----   --------    --------------------     --------
PI   CN 1413976           A     20030430    CN 2002-131215           20020913
PRAI CN 2002-131215              20020913
GI
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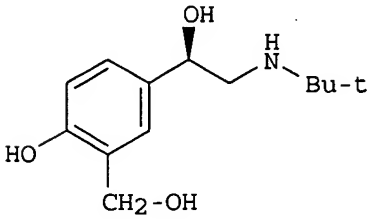


I

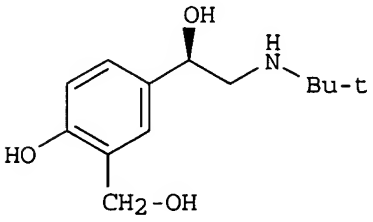
AB L-Salbutamol (I) is prepared stereoselectively from 4-hydroxybenzaldehyde via hydroxymethylation, protection of hydroxy groups, Wittig reaction of formyl group to form the styrene derivative intermediate which undergoes enantioselective dihydroxylation with Ad-mix-β, conversion of primary hydroxyl to tosylate and finally substituted with tert-butylamine. The other stereoisomer can be prepared by changing the catalyst for the asym. dihydroxylation step.

=> d bib abs 16 1-19

L6 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:558824 CAPLUS
DN 143:153146
TI New process for preparing L-salbutamol
IN Chen, Jianlong
PA Suzhou Junning New Medicine Developing Center Co., Ltd., Peop. Rep. China; Shanghai GLSynthesis Co. Ltd.
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 10 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1413976	A	20030430	CN 2002-131215	20020913
PRAI	CN 2002-131215		20020913		

GI



I

AB L-Salbutamol (I) is prepared stereoselectively from 4-hydroxybenzaldehyde via hydroxymethylation, protection of hydroxy groups, Wittig reaction of formyl group to form the styrene derivative intermediate which undergoes enantioselective dihydroxylation with Ad-mix-β, conversion of primary hydroxyl to tosylate and finally substituted with tert-butylamine. The other stereoisomer can be prepared by changing the catalyst for the asym. dihydroxylation step.

L6 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:760306 CAPLUS
DN 141:401083
TI Enantiomeric separation of basic compounds using heptakis(2,3-di-O-methyl-6-O-sulfo)-β-cyclodextrin in combination with potassium camphorsulfonate in nonaqueous capillary electrophoresis: Optimization by means of an experimental design
AU Servais, Anne-Catherine; Fillet, Marianne; Chiap, Patrice; Dewe, Walthere; Hubert, Philippe; Crommen, Jacques
CS Department of Analytical Pharmaceutical Chemistry, Institute of Pharmacy, University of Liege, Liege, Belg.
SO Electrophoresis (2004), 25(16), 2701-2710
CODEN: ELCTDN; ISSN: 0173-0835

PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English
AB The enantiomeric separation of a series of basic pharmaceuticals (β-blockers, local anesthetics, sympathomimetics) has been investigated in nonaq. capillary electrophoresis (NACE) systems using heptakis(2,3-di-O-methyl-6-O-sulfo)-β-cyclodextrin (HDMS-β-CD) in combination with potassium camphorsulfonate (camphorSO3-). For this purpose, a face-centered central composite design with 11 exptl. points was applied. The effect of the concns. of HDMS-β-CD and camphorSO3- on enantioresoln. was statistically evaluated and depended largely on the considered analyte. The presence of camphorSO3- was found to be particularly useful for the enantiosepn. of compds. with high affinity for the anionic CD. CamphorSO3- seems to act as a competitor, reducing the affinity for the CD, probably by ion-pair formation with these analytes. For compds. with lower affinity for HDMS-β-CD, the combination of camphorSO3- and the CD appeared to have a favorable effect on enantioresoln. only if the optimal CD concentration could be reached. On the other hand, for compds. characterized by a very low affinity for the anionic CD, the association of camphorSO3- and HDMS-β-CD is always unfavorable. Finally, exptl. conditions were selected by means of the multivariate approach in order to obtain the highest resolution (Rs) value for each studied compound
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:425522 CAPLUS
DN 142:55631
TI The exploration of promising compounds powered by the synthetic design system
AU Oka, Noriko; Tanaka, Akio
CS Sumika Tech. Inf. Serv., Inc., Osaka, 554-8558, Japan
SO Joho Kanri (2004), 47(2), 73-81
CODEN: JOKAAB; ISSN: 0021-7298
PB Kagaku Gijutsu Shinko Kiko
DT Journal
LA Japanese
AB For exploration of promising intermediates in fine chemical industry, a new method using a computer-aided system for synthesis design, SYNSUP, is presented. The synthesis design system is utilized to generate promising intermediates. The promising intermediates are included in the common intermediates, which have >1 different target compds. As compared with the current ongoing chemical process, the facility and validity of the proposed intermediates were evaluated with respect to candidates for new intermediates. Consequently, it was cleared that the extracted intermediates contained not only the reported intermediates but also the new ones. The new tactics is very powerful to find new promising intermediates among various chemical compds. In addition, the total system including SYNSUP and extraction of common intermediates is automatically executed to a huge amount of chems. in a computer, although the similar operation is impossible by manual.

L6 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:291042 CAPLUS
DN 140:303395
TI Procedure for the preparation of (R)-salbutamol by asymmetric hydrogenation of salbutamon using rhodium and chiral divalent phosphine catalysts
IN Kreye, Paul; Lehnhart, Alfons; Klingler, Franz Dietrich
PA Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G., Germany
SO Ger., 6 pp.

CODEN: GWXXAW
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 10249576	B3	20040408	DE 2002-10249576	20021024
CA 2503439	AA	20040506	CA 2003-2503439	20031018
WO 2004037767	A1	20040506	WO 2003-EP11583	20031018
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1585718	A1	20051019	EP 2003-773653	20031018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2005009926	A1	20050113	US 2003-692060	20031023
PRAI DE 2002-10249576	A	20021024		
US 2003-499514P	P	20030902		
WO 2003-EP11583	W	20031018		

OS CASREACT 140:303395
AB (R)-salbutamol (levosalbutamol) was prepared by asym. hydrogenation of salbutamon (4-hydroxy-3-hydroxymethylphenyl tert-butylaminomethyl ketone) using rhodium and chiral divalent phosphine catalysts. Thus, a mixture of salbutamon, Et3N, (RhCODCl)2, and (2R,4R)-4-dicyclohexylphosphino-2-diphenylphosphinomethyl-N-methylaminocarbonylpyrrolidine in MeOH/PhMe was stirred 23 h at 50° under 20 bar H2 to give 90% (R)-salbutamol in 70% enantiomeric excess.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:465958 CAPLUS
DN 137:47001
TI Process for preparing and resolving the optical enantiomers of salbutamol
IN Hamied, Yusuf Khwaja; Kankan, Rajendra Narayanrao; Rao, Dharmaraj Ramachandra
PA Cipla Limited, India; Wain, Christopher Paul
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002048090	A1	20020620	WO 2001-GB5444	20011210
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2431400	AA	20020620	CA 2001-2431400	20011210
AU 2002020918	A5	20020624	AU 2002-20918	20011210

	EP 1349828	A1	20031008	EP 2001-270520	20011210
	EP 1349828	B1	20050316		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	AT 291006	E	20050415	AT 2001-270520	20011210
	PT 1349828	T	20050729	PT 2001-270520	20011210
	ES 2240335	T3	20051016	ES 2001-1270520	20011210
	US 2004054215	A1	20040318	US 2003-450155	20030915
	HK 1060345	A1	20050624	HK 2004-102315	20040330
PRAI	GB 2000-30171	A	20001211		
	WO 2001-GB5444	W	20011210		

OS CASREACT 137:47001

AB A process for making optically pure (R)- and (S)-salbutamol comprises obtaining the (R)- or (S)-isomer of either salbutamol or a salbutamol precursor (e.g., 4-benzyl albuterol) in substantially optically pure form by resolving a racemic or optically impure mixture of enantiomers of salbutamol or of said precursor with either (L)- or (D)-tartaric acid, and where necessary converting the isomer of the precursor into either (R)- or (S)-salbutamol, resp., and then optionally converting them into a pharmaceutically acceptable salt.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:532121 CAPLUS
DN 135:92436
TI Process for preparing beta-adrenoceptor agonists by combination and disconnection method
IN Deng, Jingen; Peng, Xiaohua; Hua, Zhengmao; Wu, Tongfei; Fu, Fangmin; Cui, Xin; Yang, Liping
PA Chengdu Inst. of Organic Chemistry, Chinese Academy of Sciences, Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 14 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1273966	A	20001122	CN 1999-117313	19991019
PRAI	CN 1999-117313		19991019		

AB Racemic beta-adrenoceptor agonist is resolved by complexing with chiral resolving agent in organic solvent under refluxing for 5 min-6 h, crystallizing for 1-40 h, filtering, and salifying with inorg. acid. The chiral resolving agent is D-tartaric acid or dibenzoyl-D-tartaric acid and its derivs. The organic solvent is alc., ketone, and/or Et acetate. The process is used for optical resolution of albuterol, terbutaline, metaproterenol, isoproterenol, epinephrine, clenbuterol, bitolterol, bambuterol, salmeterol, and cimaterol.

L6 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:665746 CAPLUS
DN 132:6266
TI Racemic switches. Historical perspectives and current status
AU Cannarsa, Michael J.
CS PPG-Sipsy Chemical Co., West Chester, PA, 19382, USA
SO Chimica Oggi (1999), 17(9), 28-32
CODEN: CHOGDS; ISSN: 0392-839X
PB TeknoScienze
DT Journal; General Review
LA English
AB A review with 6 refs., describing historical development of asym.

synthesis technol. and recent developments in racemic switches of perprazole, fluoxetine, D-methylphenidate, levalbuterol, levobupivacaine, citalopram, cetirizine, norcisapride-(+), zopiclone, and formoterol-(R,R). The single enantiomers (S)-ibuprofen, dexketoprofen, dexfenfluramine, and verapamil continue to struggle for a place in the market.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:549269 CAPLUS
DN 131:184952
TI Preparation of optically enriched (R)- or (S)-albuterol via resolution of 2-(N-tert-butylamino)-1-(2,2-dimethyl-1,2-benzodioxin-6-yl)ethanol using a chiral tartaric acid derivative.
IN Stevens, Anne; Hunter, Roger; Nassimbeni, Luigi; Caira, Mino; Scott, Janet; Clauss, Rainer; Gibson, Joanne; Grimmbacher, Tarron
PA Fine Chemicals Corporation (Proprietary) Limited, S. Afr.; Howden, Christopher Andrew
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9942460	A1	19990826	WO 1999-GB518	19990219
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	ZA 9900977	A	20000404	ZA 1999-977	19990208
	CA 2320756	AA	19990826	CA 1999-2320756	19990219
	AU 9925393	A1	19990906	AU 1999-25393	19990219
	EP 1056740	A1	20001206	EP 1999-905097	19990219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6365756	B1	20020402	US 2000-622946	20001113
PRAI	ZA 1998-1428	A	19980220		
	WO 1999-GB518	W	19990219		

OS CASREACT 131:184952
AB 2-(N-tert-butylamino)-1-(2,2-dimethyl-1,2-benzodioxin-6-yl)ethanol (I) was prepared by suspending albuterol or a salt thereof in acetone, adding a suitable acid, adding a suitable aqueous or nonaq. basic solution, and recovery of I. Thus, (R,S)-albuterol in acetone was treated with dropwise with BF3.Et2O under ice cooling followed by 1 h stirring to give 96% I. The latter was resolved using (2S,3S)-(+)-di-O-benzoyltartaric acid followed by hydrolysis in aqueous HOAc to give (R)-albuterol acetate.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:524540 CAPLUS
DN 131:310601
TI Resolution of albuterol acetonide
AU Caira, Mino R.; Hunter, Roger; Nassimbeni, Luigi R.; Stevens, Anne T.
CS Department of Chemistry, University of Cape Town, Rondebosch, 7701, S. Afr.
SO Tetrahedron: Asymmetry (1999), 10(11), 2175-2189

CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier Science Ltd.
DT Journal
LA English
AB The (R)-enantiomer of albuterol has been isolated via resolution of albuterol acetonide with (2S,3S)-di-O-benzoyl- or (2S,3S)-di-O-toluoyltartaric acid. Said acetonide is α-[[(1,1-dimethylethyl)amino]methyl]-2,2-dimethyl-4H-1,3-benzodioxin-6-methanol. The absolute configuration of the resolved acetonide was assessed by 1H NMR anal. of its (R)-Mosher's ester, and confirmed by an X-ray crystal structure determination of the (R)-phenylethylurea derivative of the (S)-enantiomer.
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:283528 CAPLUS
DN 129:14067
TI Resolution of salbutamol enantiomers in human urine by reversed-phase high performance liquid chromatography after derivatization with 2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl isothiocyanate
AU Kim, Kyeong Ho; Kim, Tae Kyun
CS College Pharmacy, Kangwon National University, Chunchon, 200-701, S. Korea
SO Archives of Pharmacal Research (1998), 21(2), 217-222
CODEN: APHRDQ; ISSN: 0253-6269
PB Pharmaceutical Society of Korea
DT Journal
LA English
AB A stereospecific HPLC method has been developed for the resolution of the enantiomers of salbutamol in human urine. After solid-phase extraction and derivatization with 2,3,4,6-tetra-O-a-cetyl-β-D-glucopyranosyl isothiocyanate, the diastereomeric derivs. were resolved (Rs=1.83) on 5 μm octadecylsilan column using 35% acetonitrile in 0.05M ammonium acetate buffer (pH=6) as a mobile phase with electrochem. detection. The diastereomeric derivs. were formed within 30 min. The detection limit of each enantiomer was 20 ng/mL (S/N=3).
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:417483 CAPLUS
DN 127:99905
TI Enantiomeric separation of racemic methyl phenidate and albuterol with cyclodextrins by capillary zone electrophoresis
AU Ruan, Zongqin; Yuan, Min; Ou, Qingyu; Yu, Weile
CS Lanzhou Inst. Chem. Phys. Acad. Sin., Lanzhou, 730000, Peop. Rep. China
SO Fenxi Huaxue (1997), 25(6), 743
CODEN: FHHHDT; ISSN: 0253-3820
PB Zhongguo Huaxuehui "Fenxi Huaxue" Bianji Weiyuanhui
DT Journal
LA Chinese
AB Enantiomers of racemic Me phenidate and albuterol were separated with cyclodextrins by capillary zone electrophoresis and determined by UV detector at 214 and 210 nm, resp.

L6 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1996:524390 CAPLUS
DN 125:167556
TI Enantioselective preparation of optically pure albuterol
IN Gao, Yun; Zepp, Charles M.
PA Sepracor, Inc., USA
SO U.S., 7 pp., Cont.-in-part of U.S. 5,399,765.
CODEN: USXXAM

DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5545745	A	19960813	US 1995-376072	19950120
	US 5399765	A	19950321	US 1994-247302	19940523
	CA 2190577	AA	19951130	CA 1995-2190577	19950523
	WO 9532178	A1	19951130	WO 1995-US6539	19950523
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9525559	A1	19951218	AU 1995-25559	19950523
	AU 686386	B2	19980205		
	EP 763010	A1	19970319	EP 1995-919913	19950523
	EP 763010	B1	20000830		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10500954	T2	19980127	JP 1995-530513	19950523
	AT 195931	E	20000915	AT 1995-919913	19950523
	ES 2151065	T3	20001216	ES 1995-919913	19950523
	PT 763010	T	20001229	PT 1995-919913	19950523
	GR 3034982	T3	20010228	GR 2000-402605	20001124
PRAI	US 1994-247302	A2	19940523		
	US 1995-376072	A	19950120		
	WO 1995-US6539	W	19950523		

AB (R)-albuterol is prepared by the resolution of a mixture of enantiomers of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-(phenylmethoxy)benzoate or α-[[(1,1-dimethylethyl)amino]methyl]-4-(phenylmethoxy)-1,3-benzenedimethanol using a chiral acid such as (+/-) di-toluoyltartaric acid or (+/-) di-benzoyltartaric acid, cooling the solution so that primarily one enantiomer crystallizes, treating the diastereomeric salt with a base to liberate the enantiomer free base, reducing the enantiomer, debenzylating the enantiomer in the case of the benzyl derivative, and recovering a single enantiomer of albuterol (e.g., the R enantiomer). Preliminary research indicates that administration of the pure R-enantiomer may offer an improved therapeutic ratio.

L6 ANSWER 13 OF 19 CAPLUS
AN 1996:175602 CAPLUS
DN 124:232035
TI Enantioselective preparation of optically pure albuterol
IN Gao, Yun; Zepp, Charles Melvyn
PA Sepracor, Inc., USA
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9532178	A1	19951130	WO 1995-US6539	19950523
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5399765	A	19950321	US 1994-247302	19940523

	US 5545745	A	19960813	US 1995-376072	19950120
	AU 9525559	A1	19951218	AU 1995-25559	19950523
	AU 686386	B2	19980205		
	EP 763010	A1	19970319	EP 1995-919913	19950523
	EP 763010	B1	20000830		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10500954	T2	19980127	JP 1995-530513	19950523
	AT 195931	E	20000915	AT 1995-919913	19950523
	GR 3034982	T3	20010228	GR 2000-402605	20001124
PRAI	US 1994-247302	A	19940523		
	US 1995-376072	A	19950120		
	WO 1995-US6539	W	19950523		

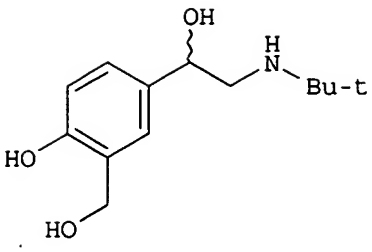
OS CASREACT 124:232035

AB This invention relates to a method for producing albuterol by the resolution of a mixture of enantiomers of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate using di-toluoyltartaric acid. The invention further relates to a method for producing albuterol by the resolution of a mixture of enantiomers of α-[[(1,1-dimethylethyl)amino]methyl]-4-(phenylmethoxy)-1,3-benzenedimethanol, etc, using a chiral acid. This invention provides an economical process for making optically pure albuterol.

L6 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:795449 CAPLUS
DN 124:55545
TI Asymmetric synthesis of (R)- and (S)-arylethanolamines from imino ketones
IN Gao, Yun; Hong, Yaping; Zepp, Charles M.
PA Sepracor, Inc., USA
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5442118	A	19950815	US 1994-231231	19940422
	CA 2188027	AA	19951102	CA 1995-2188027	19950420
	WO 9529146	A1	19951102	WO 1995-US4869	19950420
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9523913	A1	19951116	AU 1995-23913	19950420
	AU 685274	B2	19980115		
	EP 766662	A1	19970409	EP 1995-917086	19950420
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10501794	T2	19980217	JP 1995-527762	19950420
PRAI	US 1994-231231	A	19940422		
	WO 1995-US4869	W	19950420		

OS CASREACT 124:55545; MARPAT 124:55545
GI



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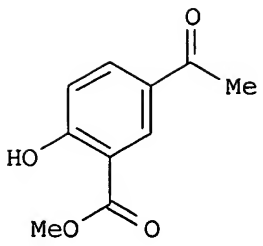

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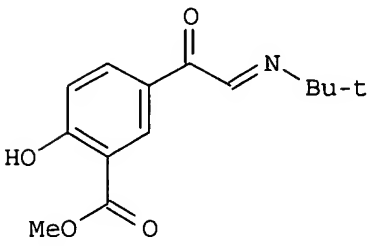
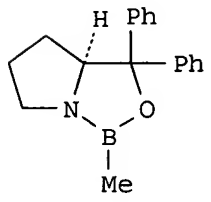


III



IV

AB A method for enantioselective reduction of α-imino ketones to α-amino alcs. is disclosed. The method uses a borane reducing agent, and a chiral 1,3,2-oxazaborole derivative as catalyst. The method is applied to the synthesis of (R)-albuterol [(R)-I] from Me 5-acetylsalicylate (II) in high yield and high optical purity. For example, II was α-oxidized with aqueous HBr and DMSO to give the corresponding glyoxal (crude, 80%), which was condensed with tert-BuNH2 to give imino ketone III (63%). Then, III and BH3.SMe2 in anhydrous PhMe were slowly added (3 h) at 0° to 10 mol% catalyst IV in anhydrous PhMe. Stirring, refluxing, quenching with MeOH, and workup gave (S)-albuterol, i.e. (S)-I, in >90% yield and 93-95% enantiomeric excess (ee). Optimization of the process, and applicability to other β-blockers and β-agonists, are reported and/or discussed.

L6 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:713767 CAPLUS
DN 123:111660
TI Enantioselective preparation of optically pure albuterol via resolution of methyl 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate with ditoluoyltartaric acid
IN Gao, Yun; Zepp, Charles M.
PA Sepracor, Inc., USA
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5399765	A	19950321	US 1994-247302	19940523
	US 5545745	A	19960813	US 1995-376072	19950120
	CA 2190577	AA	19951130	CA 1995-2190577	19950523
	WO 9532178	A1	19951130	WO 1995-US6539	19950523
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9525559	A1	19951218	AU 1995-25559	19950523

	AU 686386	B2	19980205		
	EP 763010	A1	19970319	EP 1995-919913	19950523
	EP 763010	B1	20000830		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10500954	T2	19980127	JP 1995-530513	19950523
	AT 195931	E	20000915	AT 1995-919913	19950523
	ES 2151065	T3	20001216	ES 1995-919913	19950523
	PT 763010	T	20001229	PT 1995-919913	19950523
	GR 3034982	T3	20010228	GR 2000-402605	20001124
PRAI	US 1994-247302	A2	19940523		
	US 1995-376072	A	19950120		
	WO 1995-US6539	W	19950523		

OS CASREACT 123:111660

AB A method for obtaining a single enantiomer of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate (albuterol precursor) comprising the steps of: (a) dissolving a mixture of enantiomers of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate and a chiral acid selected from the group consisting of (-)-di-toluoyl-L-tartaric acid and (+)-di-toluoyl-D-tartaric acid in methanol by heating to form a solution; (b) allowing said solution to cool, whereby a salt of primarily one stereoisomer crystallizes; (c) separating said salt from said solution; (d) recrystg. said salt from methanol, whereby a diastereomeric salt having greater than 90% ee of an enantiomer of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate is obtained (e) separating said diastereomeric salt from the methanol solvent; and (f) liberating said enantiomer of Me 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate from said diastereomeric salt by treatment with base. Thus, e.g., a mixture of phenolic precursor Me (±)-5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate and (+)-di-p-toluoyl-D-tartaric acid afforded a 53% yield (93% ee) of Me (R)-5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-2-hydroxybenzoate diastereomeric salt; a single recrystn. afforded 33% yield of 99% ee (R) diastereomeric salt.

L6 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1995:262742 CAPLUS

DN 122:105510

TI Synthetic applications of optically active cyanohydrins. Enantioselective syntheses of the hydroxy amides tembamide and aegeline, the cardiac drug denopamine, and some analogs of the bronchodilator salbutamol

AU Brown, Roger F. C.; Donohue, Andrew C.; Jackson, W. Roy; McCarthy, Tom D.

CS Department Chemistry, Monash University, Clayton, 3168, Australia

SO Tetrahedron (1994), 50(48), 13739-52
CODEN: TETRAB; ISSN: 0040-4020

PB Elsevier

DT Journal

LA English

OS CASREACT 122:105510

AB The natural hydroxy amides, (-)-tembamide and (-)-aegeline, and the cardiac drug (-)-denopamine have been prepared in homochiral form in good overall yield (>65%) from p-methoxy- or p-allyloxybenzaldehyde by synthetic sequences involving enantioselective hydrocyanation of the aldehydes. Similar chemical has been used to prepare analogs of the bronchodilator(-)-salbutamol both in high yield and with good enantiomeric excess.

L6 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1994:644916 CAPLUS

DN 121:244916

TI Chiral separation of salbutamol enantiomers in human plasma

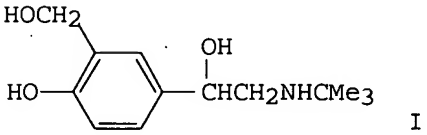
AU Seo, Joung Min; Kim, Kyeong Ho

CS Coll. Pharm., Kangwon Natl. Univ., Kangwon-do, 200-701, S. Korea

SO Archives of Pharmacal Research (1994), 17(4), 244-8

CODEN: APHRDQ; ISSN: 0253-6269
DT Journal
LA English
AB A stereoselective and sensitive high performance liquid chromatog. using fluorescence detector was examined for the determination of R(-) and S(+)-salbutamol in human plasma. Solid phase extraction method using silica as sorbent was used to extract salbutamol racemates from plasma. After fractionation and freeze-drying of the eluates containing salbutamol racemates, they were separated and quantified on a chiral stationary column. The detection limit of each enantiomer was 2 ng/mL in human plasma (S/N = 3).

L6 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1981:400170 CAPLUS
DN 95:170
TI Urinary excretion of salbutamol enantiomers in man by stable isotope tracer technique
AU Baba, Shigeo; Goromaru, Tsuyoshi; Kawaguchi, Izumi; Kishi, Keisuke
CS Tokyo Coll. Pharm., Hachioji, Japan
SO Iyakuhin Kenkyu (1981), 12(1), 84-90
CODEN: IYKEDH; ISSN: 0287-0894
DT Journal
LA Japanese
GI



I

AB Salbutamol (I) [18559-94-9], used as a bronchodilator, is a mixture of S(+)- [34271-50-6] and R(-)- [34391-04-3] isomers; the activity of the R(-)-isomer is 64 times higher than that of S(+)-isomer. The excretion of I enantiomers in man was studied by a stable isotope tracer technique. An equimolar mixture of S(+)- and R(-)-I was administered orally to 2 healthy volunteers and the urine was collected for 24 h. The percentage of the dose excreted as unchanged S(+)- and R(-)-isomers were, resp., 28.9 and 15.7% in subject 1, and 51.7 and 15.7% in subject 2. The elimination rate consts. of the 2 isomers were almost the same in each subject.

L6 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1972:59211 CAPLUS
DN 76:59211
TI Optical enantiomers of α-tert-butylaminomethyl-4-hydroxy-m-xylylene-α,α'-diol
IN Middlemiss, David
PA Allen and Hanburys Ltd.
SO Ger. Offen., 13 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2128258	A	19711223	DE 1971-2128258	19710607
	DE 2128258	C2	19830811		
	GB 1298494	A	19721206	GB 1970-29367	19700617
	IL 36927	A1	19740114	IL 1971-36927	19710520

	CA 984854	A1	19760302	CA 1971-113450	19710520
	ZA 7103298	A	19720126	ZA 1971-3298	19710521
	BE 768120	A1	19711206	BE 1971-104266	19710604
	ES 392008	A1	19740801	ES 1971-392008	19710607
	JP 55025181	B4	19800704	JP 1971-40262	19710609
	AT 309403	B	19730827	AT 1971-5101	19710614
	DK 130920	B	19750505	DK 1971-2940	19710616
	NL 7108368	A	19711221	NL 1971-8368	19710617
	NL 173635	B	19830916		
	NL 173635	C	19840216		
	FR 2100772	A5	19720324	FR 1971-22011	19710617
	FR 2100772	B1	19750606		
	CH 553746	A	19740913	CH 1971-8862	19710617
PRAI	GB 1970-29367	A	19700617		

AB The optical enantiomers of the title compound 4,3-HO(HOCH2)C6H3-CH(OH)CH2NHBu-tert (I), useful as adrenergic β-receptor stimulating agents, were prepared by resolution of 4,3-PhCH2O-(MeO2C)C6H3CH(OH)CH2N(CH2Ph)Bu-tert (II) with O,O'-di-p-toluyltartaric acid (III), fractional crystallization of the salt, and reduction and catalytic debenzylation of the base. Thus, reaction of 30 g racemic II and 25.6 g (+)-III in AcOEt at 70° gave 27 g (+)-salt, which was converted with NaHCO3 into 3 g (-)-II. Reduction of (-)-II in THF with LiAlH4 gave active 4,3-PhCH2O(HOCH2)-C6H3CH(OH)CH2N(CH2Ph)Bu-tert which was debenzylated by hydrogenation on Pd-C to give (+)-I. Similarly prepared was (-)-I. Compositions for tablets and aerosol prepns. were reported.

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     (FILE 'HOME' ENTERED AT 12:03:11 ON 07 DEC 2005)

     FILE 'CAPLUS' ENTERED AT 12:03:17 ON 07 DEC 2005
L1            0 S SALBUTAMONE

     FILE 'REGISTRY' ENTERED AT 12:03:48 ON 07 DEC 2005
                E SALBUTAMONE/CN
L2            1 S E2
                E SALBUTAMOL/CN
L3            1 S E3

     FILE 'CAPLUS' ENTERED AT 12:05:03 ON 07 DEC 2005
L4            5 S L2 AND L3

     FILE 'REGISTRY' ENTERED AT 12:06:44 ON 07 DEC 2005
                E LEVOSABUTAMOL/CN
L5            1 S E4

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     FILE 'REGISTRY' ENTERED AT 12:07:20 ON 07 DEC 2005

     FILE 'CAPLUS' ENTERED AT 12:07:33 ON 07 DEC 2005
L6           19 S L5/P
L7           37 S HYROGENATION
L8       169937 S HYDROGENATION
L9            2 S L8 AND L6
L10       66908 S RHODIUM
L11       66644 S PHOSPHINE
L12          20 S LL1 AND L10
L13           0 S L12 AND L6

=> d 19 bib abs 1-2

L9   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2005 ACS on STN
AN   2004:291042  CAPLUS
DN   140:303395
TI   Procedure for the preparation of (R)-salbutamol by asymmetric
     hydrogenation of salbutamon using rhodium and chiral divalent
     phosphine catalysts
IN   Kreye, Paul; Lehnhart, Alfons; Klingler, Franz Dietrich
PA   Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G., Germany
SO   Ger., 6 pp.
     CODEN: GWXXAW
DT   Patent
LA   German
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.          DATE
     --------------      ----   --------    --------------------     --------
PI   DE 10249576          B3    20040408    DE 2002-10249576         20021024
     CA 2503439           AA    20040506    CA 2003-2503439          20031018
     WO 2004037767        A1    20040506    WO 2003-EP11583          20031018
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
             GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
             LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
             OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
             TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
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BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
EP 1585718 A1 20051019 EP 2003-773653 20031018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
US 2005009926 A1 20050113 US 2003-692060 20031023
PRAI DE 2002-10249576 A 20021024
US 2003-499514P P 20030902
WO 2003-EP11583 W 20031018
OS CASREACT 140:303395
AB (R)-salbutamol (levosalbutamol) was prepared by asym. **hydrogenation** of salbutamon (4-hydroxy-3-hydroxymethylphenyl tert-butylaminomethyl ketone) using rhodium and chiral divalent phosphine catalysts. Thus, a mixture of salbutamon, Et3N, (RhCODCl)2, and (2R,4R)-4-dicyclohexylphosphino-2-diphenylphosphinomethyl-N-methylaminocarbonylpyrrolidine in MeOH/PhMe was stirred 23 h at 50° under 20 bar H2 to give 90% (R)-salbutamol in 70% enantiomeric excess.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1972:59211 CAPLUS
DN 76:59211
TI Optical enantiomers of α-tert-butylaminomethyl-4-hydroxy-m-xylylene-α,α'-diol
IN Middlemiss, David
PA Allen and Hanburys Ltd.
SO Ger. Offen., 13 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2128258	A	19711223	DE 1971-2128258	19710607
	DE 2128258	C2	19830811		
	GB 1298494	A	19721206	GB 1970-29367	19700617
	IL 36927	A1	19740114	IL 1971-36927	19710520
	CA 984854	A1	19760302	CA 1971-113450	19710520
	ZA 7103298	A	19720126	ZA 1971-3298	19710521
	BE 768120	A1	19711206	BE 1971-104266	19710604
	ES 392008	A1	19740801	ES 1971-392008	19710607
	JP 55025181	B4	19800704	JP 1971-40262	19710609
	AT 309403	B	19730827	AT 1971-5101	19710614
	DK 130920	B	19750505	DK 1971-2940	19710616
	NL 7108368	A	19711221	NL 1971-8368	19710617
	NL 173635	B	19830916		
	NL 173635	C	19840216		
	FR 2100772	A5	19720324	FR 1971-22011	19710617
	FR 2100772	B1	19750606		
	CH 553746	A	19740913	CH 1971-8862	19710617
PRAI	GB 1970-29367	A	19700617		

AB The optical enantiomers of the title compound 4,3-HO(HOCH2)C6H3-CH(OH)CH2NHBu-tert (I), useful as adrenergic β-receptor stimulating agents, were prepared by resolution of 4,3-PhCH2O-(MeO2C)C6H3CH(OH)CH2N(CH2Ph)Bu-tert (II) with O,O'-di-p-toluyltartaric acid (III), fractional crystallization of the salt, and reduction and catalytic debenzylation of the base. Thus, reaction of 30 g racemic II and 25.6 g (+)-III in AcOEt at 70° gave 27 g (+)-salt, which was converted with NaHCO3 into 3 g (-)-II. Reduction of (-)-II in THF with LiAlH4 gave active 4,3-PhCH2O(HOCH2)-C6H3CH(OH)CH2N(CH2Ph)Bu-tert which was debenzylated by **hydrogenation** on Pd-C to give (+)-I. Similarly prepared was (-)-I. Compositions for tablets and aerosol prepns. were reported.

=> d his

(FILE 'HOME' ENTERED AT 12:03:11 ON 07 DEC 2005)

FILE 'CAPLUS' ENTERED AT 12:03:17 ON 07 DEC 2005
L1 0 S SALBUTAMONE

FILE 'REGISTRY' ENTERED AT 12:03:48 ON 07 DEC 2005
E SALBUTAMONE/CN
L2 1 S E2
E SALBUTAMOL/CN
L3 1 S E3

FILE 'CAPLUS' ENTERED AT 12:05:03 ON 07 DEC 2005
L4 5 S L2 AND L3

=> d bib abs 1-5

L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:800420 CAPLUS
DN 136:205577
TI Two-dimensional TLC method for identification and quantitative analysis of salbutamol and related impurities in pharmaceutical tablet formulation
AU Aboul-Enein, Hassan Y.; Abu-Zaid, Suhair
CS Pharmaceutical Analysis Laboratory, Biological and Medical Research Department (MBC-03), King Faisal Specialist Hospital and Research Centre, Riyadh, 11211, Saudi Arabia
SO Analytical Letters (2001), 34(12), 2099-2110
CODEN: ANALBP; ISSN: 0003-2719
PB Marcel Dekker, Inc.
DT Journal
LA English
AB A rapid and sensitive TLC method was developed and validated for the anal. of salbutamol and identification of its related impurities compds. Spectro-densitometric scanning-integration was performed at an absorbance wave length of 254 nm. To justify the suitability of the proposed method, accuracy, precision and recovery studies were performed at three selected concns. levels. The recovery data reveals that the RSD for intra-day and inter-day anal. were found to be 4.86 and 1.23%, resp. A TLC plastic plate precoated with silica gel was used as the stationary phase. The solvent system was acetonitrile: methanol: ammonium hydroxide (10: 85: 5 volume/volume/v) gave a dense and compact spots of salbutamol and related impurities compds. namely: iso-Pr salbutamol, desoxy salbutamol base, salbutamol ketone hydrochloride and 5-formyl saligenin salbutamol with a Rf values of 0.1, 0.26, 0.35, 0.54 and 0.75 resp. The calibration plots exhibited good linear relationship (r = 0.9996) over a concentration range of 5-25 mg/mL. Statical anal. proved that the proposed method is accurate and reproducible. The method is stability indicating and being economical can be employed for the routine anal. of the bulk material of salbutamol and its pharmaceutical tablets formulations.
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:283060 CAPLUS
DN 133:94663
TI Analysis of salbutamol and related impurities by derivative spectrometry
AU Aboul-Enein, Hassan Y.; Surmeian, Mariana
CS Bioanalytical and Drug Development Laboratory, Biological & Medical Research Department (MBC-03), King Faisal Specialist Hospital and Research Center, Riyadh, 11211, Saudi Arabia
SO Archiv der Pharmazie (Weinheim, Germany) (2000), 333(4), 75-78
CODEN: ARPMAS; ISSN: 0365-6233

PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB UV derivative spectrometry has been proposed for the anal. of salbutamol and related impurities. The assay of salbutamol aldehyde, 5-formylsaligenin, and salbutamol ketone was performed in sodium hydroxide 0.1 mol/L solns., using first and second derivative spectra. The method was applied for the assay of related impurities of com. samples of salbutamol sulfate.
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1996:355227 CAPLUS
DN 125:67971
TI HPLC versus SFC for the determination of salbutamol sulfate and its impurities in pharmaceuticals
AU Bernal, J. L.; del Nazal, M. J.; Velasco, H.; Toribio, L.
CS Dep. Analytical Chem., Faculty Sci., Univ. Valladolid, Valladolid, E-47005, Spain
SO Journal of Liquid Chromatography & Related Technologies (1996), 19(10), 1579-1589
CODEN: JLCTFC; ISSN: 1082-6076
PB Dekker
DT Journal
LA English
AB A method to determine salbutamol sulfate and six impurities: 5-formyl-saligenin, salbutamol ketone, salbutamol bis-ether, isopropylsalbutamol, desoxysalbutamol sulfate and salbutamol aldehyde using reversed-phase HPLC with diode array detection is proposed. The best separation was achieved using a gradient of 0.1M ammonium acetate pH 3.0 and MeCN. When the procedure was applied to the anal. of tablets and cough syrups, the versatility of the HPLC method was higher than one based on supercrit. fluid chromatog. (SFC). When using the latter method the excipient interfered in the identification and quantification of some compds. in cough syrup samples.

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1996:114982 CAPLUS
DN 124:212236
TI Separation of salbutamol and six related impurities by packed column supercritical fluid chromatography
AU Bernal, J. L.; del Nozal, M. J.; Rivera, J. M.; Serna, M. L.; Toribio, L.
CS Dep. Analytical Chem., Univ. Valladolid, Valladolid, 47005, Spain
SO Chromatographia (1996), 42(1/2), 89-94
CODEN: CHRGB7; ISSN: 0009-5893
PB Vieweg
DT Journal
LA English
AB Rapid separation of salbutamol sulfate and 6 related impurities: 5-formyl-saligenin, salbutamol ketone, salbutamol bis-ether, iso-Pr salbutamol, deoxysalbutamol sulfate and salbutamol aldehyde, was achieved by employing packed column supercrit. fluid chromatog. The effects of temperature, pressure, additive concentration and identity on retention were studied.
The use of a basic additive is necessary in order to elute the compds. and improve the peak shape. The best results were obtained by using a diol column and a gradient of modifier (methanol with 0.5% of n-propylamine).

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:492010 CAPLUS
DN 121:92010
TI Enantiomeric separation of salbutamol and related impurities using capillary electrophoresis

AU Rogan, Manus; Altria, Kevin D.; Goodall, David M.
CS Respiratory Analysis Dep., Glaxo Group Res., Ware/Hertfordshire, UK
SO Electrophoresis (1994), 15(6), 808-17
CODEN: ELCTDN; ISSN: 0173-0835
DT Journal
LA English
AB The enantiomeric resolution of salbutamol and its chiral and achiral related impurities is investigated using capillary electrophoresis. The effects of 9 varieties of cyclodextrin, cyclodextrin concentration and organic modifier concentration were studied in an attempt to resolve all possible analytes in a complex mixture of salbutamol-related solutes. Eleven components including 3 enantiomeric pairs were baseline resolved using 112 mM dimethyl-β-cyclodextrin at pH 2.5 in a citric acid/phosphate buffer. Both MeOH and iso-PrOH at up to 20% had deleterious effect on the separation Binding consts. and mobility values for the free and complexed forms of each solute were determined The results are interpreted by considering the phys. properties of the mols. under the conditions employed and a rationale proposed for the underlying basis for chiral and achiral selectivity.

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